

Work Order ID 159645

159645

U/R Page 1

Monday, April 17, 2017 9:23:14 AM

Item ID:	6F9540V00231	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:	URF 16-692				Stop	*NS2*
Item Name:	AW169 Lower Cutter Installation Assembly					
Start Date:	4/20/2017	Start Qty:	1.00	Cust Item ID:		
Required Date:	4/24/2017	Req'd Qty:	1.00	Customer:		
Reference:	SCHECULED/C					
Approvals:	Process Plan:	Date:	APR 17 2017	Tooling:	Date:	
	QC:	Date:		SPC (Y/N):	Date:	
					Run	Start *NR1*
					Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D169-841	B	APR 18 2017	DAS	6					

100
100
DC
Doc.Control -USB or Paperwork

DOCUMENT CONTROL

Memo
Photocopy bluefile per PPP D169-841-015 chg002 and create labels per 6F9540V00231 CHG002

DAS
28
3-89
JUN 02 2017

110
110
Packaging
Packaging

Pick Kit

Memo

**MATERIAL CERTIFICATION
REQUIRED
F.A.I.R. COMPLETION
REQUIRED**

DAS
6
3-89
APR 20 2017
DAS
27
3-89

120
120
QC
Quality Control

QC4- 100% Inspect kits for completeness

Memo

DAS
28
3-89
APPROVAL
ONLY
JUN 02 2017

- ARC must be created by QA
- ARC must contain concession number.
- All Parts must be identified w/ concession number.
- FAIR must be completed.

POSITIVE RECALL
EFFECTIVE 7/4/18 AUTH 5
RELEASED 1 DATE 5
CONCESSION 400000061786

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

159645

Monday, April 17, 2017 9:23:14 AM

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 4/20/2017 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 4/24/2017 **Req'd Qty:** 1.00 ***1***

Customer:

Reference: SCHECULED/C

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

130

0.00

130

Packaging

0.00

Packaging

Packaging

Memo

Identify and pack for shipping as per PPP 6F9540V00231

DAS
28
9-89

JUN 02 2017

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

DAS
21
9-89

JUN 02 2017

JUN 02 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

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Page 1

Work Order ID: 159645

159645

Parent Item: 6F9540V00231

6F9540V00231

Parent Item Name: AW169 Lower Cutter Installation Assembly

Start Date: 4/20/2017

Required Date: 4/24/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 13.11.13 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D169-841-015

Manufactured No

Each

0.0000

1

D169-841-015

AW169 Lower Cutter

**

159647

DAS
6
9-89

APR 20 2017

DAS
27
9-89

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐						☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
		OTHER :							

		Supplier Concession				PAGE 1 of 2	PLANT Leonardo Helic. - Vergiate	
Supplier NC N.	AWC 006/01		Date	02.02.2017		AW Concession	400000061786	
P/N	6F9540V00231		Grade/Category	NC		Purchase Order	4801373666	
Part Description	PROTECTR, CCP ASSY LOWER		Batch Quantity	20,000		Drawing Issue		
AW NC	GUIDO BRUSCINO		Defective Quantity	20,000		A/C Type/Model	AW6	
Supplier	DART AEROSPACE LTD		Contract					
Defect FO01 - Wrong dimensions - * 02.02.2017 09:40:16 GUIDO BRUSCINO (40067) * see supplier document attached - B/N quantities and PO's listed in the								
Cause of Defect			Repetitiveness (same P/N - Defect Code)			NO ☒ YES ☐ Follow		
ENGINEERING Evaluation and Proposal								
Engineering Evaluations, including Specialist inputs: * 10.02.2017 18:01:48 MARCELLO STEFANELLI (9273) * The part is acceptable with the action proposed by the supplier applied.			Investigation Report n.			Compliance Report n.		
Classification of Deviation from Type Design i.a.w. EASA Part 21A.91 : Minore/B								
Defect effect						Limitations		
	Before Repair		After Repair					
Safety	☐ YES	☐ YES	☐ YES	☐ NO	☐ YES (to specificity) ☒ NO			
Life or Duration	☐ YES	☐ YES	☐ YES	☐ NO				
Strenght	☐ YES	☐ YES	☐ YES	☐ NO				
Performances	☐ YES	☐ YES	☐ YES	☐ NO				
Interchangeability	☐ YES	☐ YES	☐ YES	☐ NO				
Reliability	☐ YES	☐ YES	☐ YES	☐ NO				
Maintainability	☐ YES	☐ YES	☐ YES	☐ NO				
Installability	☒ YES	☐ YES	☒ YES	☐ NO				
Testability	☐ YES	☐ YES	☐ YES	☐ NO				
Only Appearance	☐ YES	☐ YES	☐ YES	☐ NO				
No Effect	☐ YES	☐ YES	☐ YES	☐ NO				
Repair Proposal:					Decision			
* 10.02.2017 18:01:48 MARCELLO STEFANELLI (9273) * See attached supplier document.					☐ Use rep. with spec.repair(not yet applied) ☒ Use repaired with known repair(yet applied) ☐ Use As Is ☐ Use repaired for tests only(see Limitations) ☐ Use As Is for tests only(see Limitations) ☐ Scrap			
Concession Classification		☐ MAJOR ☒ MINOR		Re-submit after Repair		☐ YES ☒ NO		
Mark part with Concession		☒ NO ☐ YES		Method :				
ATE	MARCELLO STEFANELLI		CPE			Date	10.02.2017	
Checks and tests to be performed								
Repair registration		with repair WO		☒ Number:				
Repair Evaluation:								
Final Decision								
S/N	Use As Is (UTI)	Use Repaired (RIL)	Scrap (SCA)	S/N	Use As Is (UTI)	Use Repaired (RIL)	Scrap (SCA)	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
Not Serialized	Use As Is (Q.ty)	Use Repaired (Q.ty)	Scrap (Q.ty)					
Role	AW ATE	AW CPE	Inspection Clearance Repair	Quality	Customer	MoD or Authority Representative		
Signature	MARCELLO STEFANELLI							
Date	10.02.2017							

Supplier NC N.	AWC 006/01	Date	02.02.2017	AW	400000061786	Purchase Order	4801373666
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DEFECT 0001**FO01****Wrong dimensions**

attachment

Manuf. Doc. N.	AWC 006	Date		AW Doc. N.		Purchase Order	4800671131 4800722284 4801147764 4801186922 4801218851 4801288960 4801373666
AW P/N	6F9540V00231	S/N / Batch Number	B109195 Qty. (1) B133355 Qty. (2) B134314 Qty. (1) B134315 Qty. (1) B134842 Qty. (1) B137492 Qty. (1) B137355 Qty. (2) B137816 Qty. (1) B137818 Qty. (1) B137817 Qty. (1) B140379 Qty. (3) B140381 Qty. (2) B147002 Qty. (2) B150786 Qty. (1)	Grade	A	AW Drawing Issue	B

Description	Lower Cutter Assy	Batch Q.ty	20	Defective Q.ty	20
Manufacturer	Dart Aerospace	Model	AW169		

Defect(s) Description

Leonardo has informed Dart that there are interference issues installing the lower cable cutter D4842-041 onto the Leonardo interface bracket.

Department	Inspector	Signature	Date
Quality	DAS 16 9-89		2017/02/01

Defect(s) Cause

The Lower Cutter body has a dimension of 10.9 +0.25/-0.00 mm. This dimension was reported as part of the approved FAI and has been met with all delivered product.

Department	Inspector	Signature	Date
Quality	DAS 16 9-89		2017/02/01

Corrective Action

Complete
Before

In order to mitigate the interference issue for Leonardo, Dart is proposing to remove sufficient material to make the overall installation dimension at 22.15 mm +0.05/-0.35.

Department	Inspector	Signature	Date
Quality	DAS 16 9-89		2017/02/01

For "MANUFACTURER" SUPPLIERS ONLY
ENGINEERING evaluation and proposal

Engineering evaluation

Investigation report

n.....

Compliance report

n.....

Dart's position is that this change will not impact the structural substantiation presented in Report DA169-4 for the lower cutter body since this is not a section with the lowest margin. Therefore removing 0.3 mm max from each part will not impact the structural integrity of the lower cutter assembly. The dimension on the cutter body part D4842-3/-4 will be 10.80 +0.00/-0.200.

The dimension change of the two lower cutter body parts mating, plus the sealant, anodize and primer layers will be defined as a dimension of 22.15 +0.05/-0.35 mm on the assembled lower cutterbody and will be incorporated into the D4842 drawing for inspection.

	Defect effects		Limitations
	Before any repair	After any repair	
	☐ yes	☐ yes ☐ no	☐ yes (specify) ☒ no
Safety	☐ yes	☐ yes ☐ no	
Life	☐ yes	☐ yes ☐ no	
Strength	☐ yes	☐ yes ☐ no	
Performances	☐ yes	☐ yes ☐ no	
Interchangeability	☐ yes	☐ yes ☐ no	
Reliability	☐ yes	☐ yes ☐ no	
Maintainability	☐ yes	☐ yes ☐ no	
Installability	☒ yes	☐ yes ☒ no	
Testability	☐ yes	☐ yes ☐ no	
Only aspect	☐ yes	☐ yes ☐ no	
Repair Proposal None			Decision to use ☐ Use repaired with specific repair ☐ Use repaired with known repair ☐ Use as is ☐ Use repaired for tests (see Limitations) ☐ Use as is for tests (see Limitations) ☒ Scrap
Concession Classification		☒ Major ☐ Minor	Submit after repair ☐ yes ☐ no

PER CONCESSION 400000061786

Work Order ID 159645

159645

U/R Page 1

Monday, April 17, 2017 9:23:14 AM

Item ID: 6F9540V00231 **POSITIVE RECALL** Accept *N900040100* Setup Start *NS1*
Revision ID: URF 16-692 Stop *NS2*
Item Name: AW169 Lower Cutter Installation Assembly

Start Date: 4/20/2017 ^{sh} Start Qty: 1.00 *1* Cust Item ID:
Required Date: 4/24/2017 ^{AS} Req'd Qty: 1.00 *1* Customer:
Reference: SCHECULED/C

Approvals: Process Plan:  Date: APR 17 2017 ^{CONCESSION 400000061786} Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D169-841	B	PER CONCESSION 400000061786							

100 *100* DOCUMENT CONTROL
DC Memo 0.00
Doc.Control -USB or Paperwork Photocopy bluefile per PPP D169-841-015 chg002 and create labels per 6F9540V00231 CHG002

JUN 02 2017
JUN 02 2017

110 *110* MATERIAL CERTIFICATION
Pick Kit 0.00 REQUIRED
Packaging Memo 0.00 F.A.I.R. COMPLETION
Packaging REQUIRED

APR 20 2017
DAS 27
9-00

120 *120* QC
Quality Control QC4- 100% Inspect kits for completeness 0.00
Memo 0.00

APPROVAL
ONLY

ARC must be created by QA
ARC must contain concession number
All parts must be identified w/ concession number

POSITIVE RECALL
EFFECTIVE 7/4/18 AUTH 8
RELEASED DATE

CONCESSION 400000061786